IN THE CLAIMS

Please amend the claims as follows:

1. (Previously presented) A filter, comprising:

a light distribution component having an output side;

a plurality of array waveguides each defined by a ridge extending from a slab of a light transmitting medium positioned on a base, the array waveguides configured to deliver a light signal into the light distribution component such that the light signal is incident on the output side of the light distribution component;

the light transmitting medium defining at least a portion of a groove extending into the slab of the light transmitting medium between array waveguides such that the groove is spaced apart from the ridges defining array waveguides adjacent to the groove, a material in the groove being located over the base and between different regions of the light transmitting medium; and

one or more effective length tuners configured to tune the effective lengths of a plurality of the array waveguides such that the location where the light signal is incident on the output side changes.

2. (Canceled)

3. (Previously presented) The filter of claim 1, wherein the effective length tuners are configured to change the effective lengths of array waveguides such that the difference in the amount of effective length change between adjacent array waveguides is the same for different pairs of adjacent array waveguides.

4. (Previously presented) The filter of claim 3, wherein the amount of the effective length change of an array waveguide is different for each array waveguide adjacent to an effective length tuner.

5. (Previously presented) The filter of claim 3, further comprising:

electronics for operating the one or more effective length tuners so as to change the effective length such that the amount of the effective length change between adjacent array waveguides is a constant.

6. (Previously presented) The filter of claim 1, wherein each effective length tuner has a different effective area and the effective area for each effective length tuner is not positioned over the light distribution component, the effective area being the area of the effective length tuner that causes the change in effective length.

7. (Previously presented) The filter of claim 1, wherein each effective length tuner has an effective area and the difference in the effective area for adjacent array waveguides is a constant, the effective area being the area of the effective length tuner that causes the change in effective length.

8. (Previously presented) The filter of claim 7, wherein the effective area of each effective length tuner is different.

9. (Previously presented) The filter of claim 1, wherein each effective length tuner has an effective area with a different average length and the difference in the average length for adjacent array waveguides is a constant.

10. (Previously presented) The filter of claim 9, wherein the array waveguides each have a different average length and the difference in the average length of adjacent array waveguides is a constant, the difference in the average length of adjacent array waveguides being less than the average length of the effective area for adjacent array waveguides.

11. (Previously presented) The filter of claim 1, wherein the length of an effective area of each effective length tuner is different for each array waveguide and the difference in the length for adjacent array waveguides is a constant.

12-13. (Canceled)

14. (Previously presented) The filter of claim 1, further including electrical conductors to provide electrical communication between at least two effective length tuners.

15. (Previously presented) The filter of claim 1, wherein the effective length tuners are temperature control devices.

16. (Previously presented) The filter of claim 1, wherein each effective length tuner includes a plurality of electrical contacts.

17. (Previously presented) The filter of claim 1, wherein each array waveguide is at least in part defined by a ridge and at least a portion of each effective length tuner is positioned over a ridge.

18-37. (Canceled)

38. (Previously presented) A filter, comprising:

a light distribution component having an output side;

a plurality of array waveguides configured to deliver light signals into the light distribution component such that the light signals are incident on the output side of the light distribution component, the lengths of the array waveguides selected such that light signals of different wavelengths are incident on the output side at different locations; and

a common effective length tuner configured to change the effective length of a plurality of the array waveguides such that the locations where the light signals are incident on the output side of the light distribution component change, the effective length tuner including a first electrical contact positioned over a plurality of the array waveguides and a second electrical contact positioned under a plurality of the array waveguides.

39. (Previously presented) The filter of claim 38, wherein the array waveguides are defined in a light transmitting medium positioned on a base and the first electrical contact extends over a portion of the light transmitting medium positioned between adjacent array waveguides.

40. (Previously presented) The filter of claim 38, wherein the first electrical contact extends over a portion of the filter positioned between adjacent array waveguides.

41. (Previously presented) The filter of claim 38, wherein the first electrical contact or the second electrical contact has a wedge shape.

42. (Previously presented) The filter of claim 38, wherein the first electrical contact and the second electrical contact have a wedge shaped.

43. (Previously presented) The filter of claim 38, wherein at least one side of the first electrical contact has a stair step pattern.

44. (Previously presented) The filter of claim 1, wherein the one or more effective length tuners include a temperature control device positioned over a plurality of the array waveguides.

45. (Previously presented) The filter of claim 1, wherein the one or more effective length tuners includes a first electrical contact positioned over a plurality of the array waveguides and a second electrical contact positioned under a plurality of the array waveguides.

46. (Previously presented) The filter of claim 1, wherein the array waveguides are defined in a light transmitting medium positioned on a base and the interface between the light transmitting medium and the base is substantially flat.

47. (Previously presented) The filter of claim 1, wherein the groove extends through the light transmitting medium and into the base.

48. (Previously presented) The filter of claim 1, wherein the groove extends through the light transmitting medium and undercuts the array waveguides adjacent to the groove.

49. (Previously presented) The filter of claim 1, wherein the groove is one of a plurality of grooves positioned between adjacent array waveguides.

50. (Previously presented) The filter of claim 1, wherein the effective length tuners are connected in series.

51.-54. (Canceled).

55. (Previously presented) The filter of claim 38, wherein each of the array waveguides has a different length.

56. (Previously presented) The filter of claim 55, wherein the difference in the length of adjacent array waveguides is a constant.